

A Redefinition of the Tyrini with the Addition of *Anitra* Casey

(Coleoptera: Pselaphidae)

DONALD S. CHANDLER

Ohio State University, Columbus, 43210

A small series of a pselaphid was recently collected at Molino Basin in the Santa Catalina Mountains of Arizona by Karl Stephan on March 7, 1970. The beetles were found under a large, flat rock and were associated with a colony of ants warming brood. The ants were determined as *Paratrechina melanderi* (Wheeler).

The pselaphids were identified as *Anitra glaberula* Casey upon comparison with the male holotype (USNM #38748). *Anitra* was initially placed in the Ctenistini by Casey (1893) and has been retained there by succeeding workers (Raffray 1908, Park 1953). Detailed examination of the specimens convinced me that the genus was misplaced and should be removed to the Tyrini.

Casey placed the genus in the Ctenistini when the differences between that tribe and the Tyrini were not very obvious to him (p. 499). His detailed description gives no indication as to why the genus was placed in the Ctenistini rather than the Tyrini. Raffray (p. 331) questioned Casey's placement and suggested that the genus might best be placed in the Hybocephalini. However, Park (p. 316) still retained *Anitra* in the Ctenistini long after Raffray's suggestion.

The Ctenistini are placed in the same subfamily, the Pselaphinae, and the same division, the Macroscelia, as the Tyrini, but the two tribes can be separated easily by two characters. The Ctenistini are characterized by the presence of squamiform setae, particularly in the foveae and sulci of head, thorax and the articular surfaces of the abdominal segments. Also, the epistome is large, expanded and usually prominent laterally. The Tyrini are characterized by moniliform setae and the epistome may be large, but is neither expanded nor prominent. The Hybocephalini, which was referred to by Raffray, also possess squamiform setae.

Anitra possesses no squamiform setae. On the basal prontal projection there are some short, thick setae which were clearly not squamiform when a specimen mounted on a slide was examined. A similar grouping of short, thick setae occurs also in *Juxtahamotopsis* Park of the Hamotini (Park 1945), a tribe very closely related to the Tyrini. The epistome is smoothly fused to the frons and is neither expanded nor prominent. On



Fig. 1. Right maxillary palpus.

Fig. 2. Right mandible.

the basis of these characters, it is apparent that *Anitra* does not belong in the Ctenistini or the Hybocephalini and should be placed in the Tyrini.

Anitra does not fit within the Tyrini as it is currently defined, but the differences can be explained as reduction of characters due to the myrmecophilous habits of the genus. The Tyrini as currently defined have four-segmented maxillary palpi and one to three basal pronotal foveae. *Anitra* has two-segmented maxillary palpi (Fig. 1) (Casey said three segments) and has no basal pronotal foveae. The genus is certainly myrmecophilous because of the circumstances of its collection and probably functions as a synoekete. Reduction of the number of palpal segments is common to myrmecophilous genera, for example the two-segmented maxillary palpi of *Biotus* Casey (Ctenistini) and the one- or two-segmented palpi of the Clavagerinae. The reduced teeth on the mandibles (Fig. 2) are a characteristic common to myrmecophilous beetles. The lack of basal pronotal foveae is not too surprising in a tribe where the number varies from one to three

Because of the absence of squamiform setae and the lack of a prominent epistome, I conclude that *Anitra* should be placed in the Tyrini rather than the Ctenistini or Hybocephalini. I am also expanding the limits of the Tyrini so that the number of the segments of the maxillary palpus vary from two to four and the number of basal pronotal foveae vary from zero to three.

I would like to thank Dr. Charles Gaspar of the Institut Agronomique de l'état Gembloux, Belgium, for the identification of the ants, Mr. T. J. Spilman of the United States National Museum for permission to examine the Casey collection, and Dr. C. A. Triplehorn of the Ohio State University for checking the manuscript.

LITERATURE CITED

- CASEY, T. L. 1893. Coleopterological notices, V. Ann. New York Acad. Sci., 7: 281-606.
- PARK, O. 1942. A study in neotropical Pselaphidae. Northwestern Univ. Studies Bio. Sci. Med., no. 1, 403 pp.
- PARK, O. 1953. Discrimination of genera of pselaphid beetles of the United States. Bull. Chicago Acad. Sci., 9: 299-331.
- RAFFRAY, A. 1908. Pselaphidae. Genera insectorum, 64th fascicule, P. Wytzman, ed. Bruxelles. 487 pp.

RECENT LITERATURE

THE INSECTS OF VIRGINIA: No. 6. HORSEFLIES AND DEER FLIES OF VIRGINIA (DIPTERA: TABANIDAE). L. L. Pechuman. 92pp. (Research Division Bulletin 81, Virginia Polytechnic Institute and State University), 1973. Available on an exchange basis from the Research Division Mailing Room, Hutcheson Hall, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.

This faunal treatment ostensibly covers only a small geographic area, but will probably be useful as a guide to the horseflies of much of the central Atlantic coast. Included are short sections on the biology and ecology of tabanids, their taxonomic characters, distribution, and economic significance, as well as lengthier taxonomic treatment of the 95 species known to occur in Virginia. Keys are provided for separating the genera and the species within each genus (separate keys for males and females). For each species a concise summary is given of the distribution in Virginia, and the seasonal occurrence, along with biological notes.—*Editor.*